TRIOLOGICAL SOCIETY BEST PRACTICE

773  Do Preoperative Corticosteroids Benefit Patients With Chronic Rhinosinusitis With Nasal Polyposis?  
Daniel A. Carlton, MD; Alexander G. Chiu, MD

775  Is Hearing Preserved Following Radiotherapy for Vestibular Schwannoma?  
Adam R. Coughlin, MD; Anastasia A. Hunt, BS; Samuel P. Gubbels, MD

ALLERGY/IMMUNOLOGY

777  Imaging Predictors for Malignant Transformation of Inverted Papilloma  
Carol H. Yan, MD; Charles C. L. Tong, MD; Mrudula Penta, MD; Vishal S. Patel, BS; James N. Palmer, MD; Nitin D. Adappa, MD; Jayakar V. Nayak, MD, PhD; Peter H. Hwang, MD; Zara M. Patel, MD

783  Association of Epistaxis With Atherosclerotic Cardiovascular Disease  
Seraina M. Kunz, MD; David Holzmann, MD; Michael B. Soyka, MD

788  Impact of High- Versus Low-Risk Genotype on Sinonasal Radiographic Disease in Cystic Fibrosis  
Ashleigh A. Halderman, MD; Stella Lee, MD; Nyall R. London, MD, PhD; Andrew Day, MD, MPH; Raksha Jain, MD; John A. Moore, BA; Sandra Y. Lin, MD

794  The Presence of Eosinophil Aggregates Correlates With Increased Postoperative Prednisone Requirement  
Bobby A. Tajudeen, MD; Ashwin Ganti, BA; Hannah N. Kabar, BA; Mahboobeh Mahdavinia, MD, PhD; Ashley Heilingoetter, BA, MPH; Paolo Gattuso, MD; Ritu Ghati, MD; Pete S. Batra, MD, FACS

800  Efficacy of Tranexamic Acid on Operative Bleeding in Endoscopic Sinus Surgery: A Meta-analysis and Systematic Review  
Do Hyun Kim, MD, PhD; Subin Kim, MD; Harem Kang, MD; Ho Jun Jin, MD; Se Hwan Hwang, MD, PhD

BRONCHO-ESOPHAGOLOGY

808  Vocal Fold Botulinum Toxin Injection for Refractory Paradoxical Vocal Fold Motion Disorder  
Brad deSilva, MD; Drew Crenshaw, BS; Laura Matrka, MD; L. Arick Forrest, MD
### CRANIAL BASE

823  A Novel Approach to Skull-Base and Orbital Osteotomies Through Virtual Planning and Navigation  
*Leonardo Franz, MD; Miriam Isola, PhD; Daniele Bagatto, MD; Francesco Tuniz, MD; Massimo Robiony, MD, FEBOMFS*

832  Lack of Sphenoid Pneumatization Does Not Affect Endoscopic Endonasal Pediatric Skull Base Surgery Outcomes  
*Edward C. Kuan, MD, MRA; Adam C. Kauflman, MD, PhD; David Lerner, MD; Michael A. Kohanski, MD, PhD; Charles C. L. Tong, MD; Bobby A. Tajudeen, MD; Arjun K. Parasher, MD; John Y. K. Lee, MD; Phillip B. Storm, MD; James N. Palmer, MD; Nitin D. Adappa, MD*

### FACIAL PLASTICS/RECONSTRUCTIVE SURGERY

837  Higher Complication Rates in Self-Inflicted Gunshot Wounds After Microvascular Free Tissue Transfer  
*Mofiyinfolu Sokoya, MD; Aurora G. Vincent, MD; Rohan Joshi, MD; Sameep Kadakia, MD; Scott Kohlert, MD; Thomas S. Lee, MD; Masoud Saman, MD; Yadvrang Ducic, MD*

841  Nasal Obstruction Symptom Evaluation (NOSE) Score Outcomes After Septorhinoplasty  
*Deniz Gerecci, MD; Fernando J. Casanueva, MD; Jess C. Mace, MPH; Alvin Annen, BS; Dane M. Barrett, MD; Michael M. Kim, MD; Tom D. Wang, MD; Timothy L. Smith, MD, MPH; Myriam Loyo, MD*

### GENERAL OTOLARYNGOLOGY

847  Analysis of Patient Factors Associated With 30-Day Mortality After Tracheostomy  
*Khaled N. Kasiblan, MD; Amy M. Williams, PhD; Steven S. Chang, MD; Kathleen L. Yaremchuk, MD; Ross Mayerhoff, MD*

852  Incidental Mastoid Effusion Diagnosed on Imaging: Are We Doing Right by Our Patients?  
*Naveed A. Sayal, DO; Sara Boyd, DO; G. Zach White, DO; Matthew Farrugia, DO*

858  Sex Bias: Is it Pervasive in Otolaryngology Clinical Research?  
*Zainab Farzal, MD; Elizabeth D. Stephenson, BA; Lauren A. Kilpatrick, MD; Brent A. Senior, MD; Adam M. Zanation, MD*

### HEAD AND NECK

865  Osteoradionecrosis of the Sternoclavicular Joint After Laryngopharyngeal Radiation  
*Rachel Irizarry, MD; Deborah R. Shatzkes, MD; Stephanie Teng, MD; Nikita Kohli, MD; Gady Har-El, MD*

871  Radiographic Muscle Invasion Not a Recurrence Predictor in HPV-Associated Oropharyngeal Squamous Cell Carcinoma  
*Zainab Farzal, MD; Eugenie Du, MD; Eunice Yim, BA; Angela Mazal, PhD, MPH; Jose P. Zevallos, MD, MPH; Benjamin Y. Huang, MD, MPH; Trevor G. Hackman, MD*
Initial Presentation of Human Papillomavirus-Related Head and Neck Cancer: A Retrospective Review
Mian B. Khalid, BS; Peter Ting, BS; Akila Pai, BS; Jack L. Russo, MD; Richard Bakst, MD; Raymond L. Choi, MD; Marita S. Teng, MD; Eric M. Genden, MD; Brett A. Miles, DDS, MD

Adjuvant Chemotherapy Is Associated With Improved Survival for Late-Stage Salivary Squamous Cell Carcinoma
Shayan Cheraghlou, BA; Amy Schettino, BA; Cheryl K. Zogg, MSPH, MHS; Michael D. Otremba, MD; Aarti Bhatia, MD, MPH; Henry S. Park, MD, MPH; Heather A. Osborn, MD; Saral Mehra, MD, MBA; Wendell G. Yarbrough, MD, MMHC; Benjamin L. Judson, MD

One-Year Outcomes of Sialendoscopic-Assisted Salivary Duct Surgery for Sialadenitis Without Sialolithiasis
Karolina A. Plonowska, BA; Zev R. Gurman, BA; Amanda Humphrey, BS; Jolie L. Chang, MD; William R. Ryan, MD

Probe-Based Confocal Laser Endomicroscopy for Diagnosis of Nasopharyngeal Carcinoma In Vivo
Lingjie Wu, MS, MD; Huaqian Yu, PhD, MD; Ren Zhou, BS; Jiqin Luo, MS, MD; Jieli Zhao, BS; Yimeng Li, PhD, MD; Kang Wang, MS, MD; Yunfeng Wang, PhD, MD; Huawei Li, PhD, MD

Second Primary Lung Malignancy Following Head and Neck Squamous Cell Carcinoma
Meghan M. Crippen, MD; Jacob S. Brady, MD; Lindsay A. Burke, BA; Jean Anderson Eloy, MD, FACS; Soly Baredes, MD, FACS; Richard Chan Woo Park, MD, FACS

Readmission After Surgery for Oropharyngeal Cancer: An Analysis of Rates, Causes, and Risk Factors
Alexander N. Goel, BA; Karam W. Badran, MD; Abie H. Mendelsohn, MD; Dinesh K. Chhetri, MD; Joel A. Sercarz, MD; Keith E. Blackwell, MD; Maic A. St. John, MD, PhD; Jennifer L. Long, MD, PhD

Isolated Paresis of Laryngeal Adduction: What Are the Laryngoscopic and Stroboscopic Findings?
Rui Imamura, MD, PhD; Agatha M. Marcelo, MD; Domingos H. Tiuji, MD, PhD

Laryngeal Cryptococcoma Resulting in Airway Compromise in an Immunocompetent Patient: A Case Report
Justin C. Morse, MD; Alexander Gelbard, MD

Predictive Value of Globus Pharyngeus in Patients With Functional Dysphonia Versus Organic Dysphonia
Abdul-Latif Hamdan, MD, EMBA, MPH, FACS; Elite Khalifee, MD; Anthony Ghanem, MD; Hisham Mansour, MD; Edmond Yammine, MD

Real-Time Light-Guided Vocal Fold Injection: Ex Vivo Feasibility Study in a Canine Model
Wonjae Cha, MD, PhD; Jung Hoon Ro, PhD; Sun Cheol Yang, PhD; Chang Jun Choi, BS; Inchul Yang, MS; Hochul Kang, MS; Il-Young Cho, MD; Min-gyu Jo, MD; Hyoseok Seo, MD

Nimodipine Improves Vocal Fold and Facial Motion Recovery After Injury: A Systematic Review and Meta-Analysis
R. Jun Lin, MD, FRCS, MS; Michele Klein-Fedyskin, MSLS, BSN, RN, AHIP; Clark A. Rosen, MD, FACS
Medialization Laryngoplasty/Arytenoid Adduction: U.S. Outcomes, Discharge Status, and Utilization Trends
Dale C. Ekbom, MD; Diana M. Orbelo, PhD; Lindsey R. Sangaralingham, MPH; Raphael Mwangi, BS; Holly K. Van Houten, BA; Karthik Balakrishnan, MD, MPH

FDG-PET/CT for Diagnosis and Follow-up of Necrotizing (Malignant) External Otitis
Sagit Stern Shavit, MD; Hanna Bernstine, MD; Vladimir Sopen, MD; Ben Nageris, MD; Ohad Hilly, MD

Familial Unilateral Vestibular Schwannoma Is Rarely Caused by Inherited Variants in the NF2 Gene
D. Gareth Evans, MD; Andrew J. Wallace, PhD; Claire Hartley, BSc; Simon R. Freeman, FRCS; Simon K. Lloyd, FRCS; Owen Thomas, MD; Patrick Assin, FRCS; Charlotte L. Hammerbeck-Ward, FRCS; Omar Pathmanathan, FRCS; Scott A. Rutherford, FRCS; Mark Kellett, MD; Roger Laitt, MD; Andrew T. King, FRCS; Jemma Bischofrieder, BSc; Jaisbro Blakeley, MD; Miriam J. Smith, PhD

Progression of Hearing Loss in Neurofibromatosis Type 2 According to Genetic Severity
Beatrice Emmanouil, PhD; Rory Houston, MBCB; Anne May, RGN; James D. Ramsden, PhD; C. Oliver Hanzmann, MD; Dorothy Halliday, PhD; Alyson Parry, DPhil; Samuel Mackeith, MBCB

Canal Wall Up Surgery With Mastoid and Epitympanic Obliteration in Acquired Cholesteatoma
Catharine A. Hellingman, MD, PhD; Simon Geerse, MD; Maarten J. F. de Wolf, MD, PhD; Fenna A. Ebbens, MD, PhD; Erik van Spronsen, MD, MSc

Endoscope-Assisted Resection of Intravestibular Schwannoma: A Video Case Report
Cassie Pan, BS; Andrew Sewell, MD; Elias Michaelides, MD

Development of a Survival Animal Model for Subglottic Stenosis
Cáuclia Schweiger, MD, PhD; Catherine K. Hart, MD, MS; Meredith E. Tabangin, MPH; Aliza P. Cohen, MA; Nicholas J. Roetting, BS; Michael DeMarantonio, MD; Elise Becker; Jonette A. Ward, MCCTR, CCRP; Alessandro de Alarcón, MD, MPH

Postoperative Respiratory Complications and Racial Disparities Following Inpatient Pediatric Tonsillectomy: A Cross-Sectional Study
Yann-Fuu Kou, MD; Mark Sakai, BS; Gopi B. Shah, MD, MPH; Ron B. Mitchell, MD; Romaine F. Johnson, MD, MPH, FACS

Safe Use of Systemic Bevacizumab for Respiratory Recurrent Papillomatosis in Two Children
Claudio Carnevale, MD; Luis Ferrán-De la Cierva, MD; Guillermo Til-Pérez, PhD; José Antonio Peña-Zarza, PhD; Borja Oona-Rodriguez, MD; Joaquina Martínez-Lozano, MD; Pedro Sarría-Echegaray, PhD; Diego Arancibia-Tagle, MD; Manuel Tomás-Barberán, PhD

Uvulopalatopharyngoplasty Reduces the Incidence of Depression Caused by Obstructive Sleep Apnea
Jae Hoon Cho, MD, PhD; Jeffrey D. Sub, MD; Kyung-Do Han; Heung Man Lee, MD, PhD
1010 Comparing Upper Airway Stimulation to Transoral Robotic Base of Tongue Resection for Treatment of Obstructive Sleep Apnea
Colin Huntley, MD; Michael C. Topf, MD; Vanessa Christopher; Karl Doghramji, MD; Joseph Curry, MD; Maurits Boon, MD

THYROID/PARATHYROID
1014 Radiation and Second Primary Thyroid Cancer Following Index Head and Neck Cancer
Katherine M. Pollock, BS; Matthew C. Simpson, MPH; Eric Adjei Boakye, MA, PhD; Kabeer A. Mohammed, MD, MPH; John J. Dombrowski, MD; Mark A. Varvares, MD; Nosayba Osazuwa-Peters, BDS, PhD, MPH

E-ONLY ARTICLES

LARYNGOLOGY
E118 In Reference to Saliva Pepsin Detection and Proton Pump Inhibitor Response in Suspected Laryngopharyngeal Reflux
Jerome R. Lechien, MD, PhD, MS; Sven Saussez, MD, PhD; Maria Rosaria Barillari, MD, PhD; Marc Remacle, MD, PhD

E120 In Response to Saliva Pepsin Detection and Proton Pump Inhibitor Response in Suspected Laryngopharyngeal Reflux
Chen-Chi Wang, MD; Ching-Ping Wang, MD; Han-Chung Lien, MD; Kai-Li Liang, MD; Shi-Bin Liu, MD, PhD; Wen-Jiun Lin, MD; Shang-Heng Wu, MD

HEAD AND NECK
E121 In Response to Combination of Panendoscopy and Positron Emission Tomography/Computed Tomography Increases Detection of Unknown Primary Head and Neck Carcinoma
Mofiyinolu Sakeya, MD; Sameep Kadakia, MD; Yadranko Ducic, MD; Farsehad Chowdhury, MD

E122 In Reference to Combination of Panendoscopy and Positron Emission Tomography/Computed Tomography Increases Detection of Unknown Primary Head and Neck Carcinoma
Arun Sharma, MD, MS

BRONCHOESOPHAGiology
E123 Regarding pH-Neutralizing Esophageal Irrigations as a Novel Mitigation Strategy for Button Battery Injury
Magali Labadie, MD; Laurent Rehouissoux, MD; Jerome Viala, MD; Patrick Nisse, MD; Dominique Vodovar, MD PhD; Arnaud Courtis, PharmD PhD; Jean-Christophe Gallart, PharmD MD; Mathieu Glaizal, PharmD; Françoise Denoyelle, MD PhD; Nicolas Franchitto, MD PhD; Jacques Manel, MD; Thierry Lamireau, MD PhD; Emmanuel Puikarczyk, MD

E125 In Response to Letter to the Editor Regarding: pH-Neutralizing Esophageal Irrigations as a Novel Mitigation Strategy for Button Battery Injury
Rachel R. Anfang, MA; Kris R. Jatana, MD; Rebecca L. Linn, MD; Keith Rhoades, BS; Jared Fry, BS; Ian N. Jacobs, MD
Regarding Evaluation and Treatment of Pulsatile Tinnitus Associated With Sigmoid Sinus Wall Anomalies
Edwin M. Monsell, MD, PhD

In Response to Letter to the Editor Regarding: Evaluation and Treatment of Pulsatile Tinnitus Associated With Sigmoid Sinus Wall Anomalies
David J. Eisenman, MD; Ronna Hertzano, PhD, MD; Prashant Raghavan, MD; Robert Morales, MD

The Effect of Poly-p-Dioxanone Plate on the Protection and Vitality of Cartilage: An Animal Study
Onur Gulel, MD; Arzu Tuzuner, MD; Necmi Arslan, MD; Huseyin Serdar Yerlikaya, MD; Nihat Yumusak, DVM

Alterations in Macrophage Polarization in Injured Murine Vocal Folds
Shinji Kaba, MD; Ryosuke Nakamura, PhD; Masaru Yamashita, MD, PhD; Tatsuya Katsuno, PhD; Ryo Suzuki, MD; Ichiro Tateya, MD, PhD; Yo Kishimoto, MD, PhD; Koichi Omori, MD, PhD

Cryotherapy Has Antifibrotic and Regenerative Effects on Human Vocal Fold Fibroblasts
Ting Gong, MD; Chi Zhang, MD; Jing Kang, MD; JJ Lamb; Jack J. Jiang, MD, PhD

The Effects of Cryotherapy on Vocal Fold Healing in a Rabbit Model
Ting Gong, MD; Chi Zhang, MD, PhD; Jing Kang, MD; Zhewei Lou, MD; Austin Scholp, BS; Jack J. Jiang, MD, PhD

On the Cover
Examples of variability in pediatric sphenoid pneumatization patterns, including conchal (left), presellar (middle), and postsellar (right) patterns.